



Arizona School Nurse Resource Survey Summary

Children and Youth with Special Health Care Needs

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**The Office for Children with Special Health Care Needs
would like to thank the Arizona School Nurses
and
Families of Children and Youth with Special Health Care Needs for all that
you do.**



Arizona School Nurse Resource Survey

School Health is an integral component of the school environment and Arizona school nurses are an essential component of school health. School nursing requires knowledge in school, public, community, and emergency health, as the school nurse assesses and meets the health needs of school aged children and youth. This is particularly true for children and youth with special health care needs (CYSHCN), where the complexity and acuity of health needs vary.

Children with special health care needs are those children who have or are at risk for chronic physical, developmental, behavioral, or emotional conditions and who also require health and related services of a type or amount beyond that required by children generally. According to the National Survey of Children with Special Health Care Needs (2001), Arizona has approximately 153,410 CYSHCN age 0-17 years, comprising 11% of all Arizona children¹. The proportion of all households with at least one child with a special health care need in Arizona is 18%.

The Arizona Department of Health Services (ADHS) Office for Children with Special Health Care Needs (OCSHCN) conducted the Arizona School Nurse Resource Survey to identify what educational resources might help school nurses to meet the needs of their students with special health care needs. CYSHCN, their families, their primary care physicians, and other health care providers depend on the nursing assessment skills that the school nurse provides and the coordinated effort between the school nurse and the qualified health team.

Methodology

Before mailing the survey, feedback on the questions and survey format was obtained from parents and school nurses. The survey, for academic school year 2003-2004, was mailed along with a letter of explanation and a stamped, self-addressed return envelope to 990 school nurses in September 2004. The participants were requested to return the survey by October 4, 2004. Nonrespondents were sent a new copy of the questionnaire along with a follow-up letter in January 2005. Nonrespondents were requested to return the survey by February 4, 2005.

The survey was also distributed during the 2004 School Nurse Organization of Arizona and the Arizona School Nurse Consortium's summer conferences. The survey asked questions on a variety of topics, such as: 1) impact of various health care procedures, 2) the most prevalent health issues for CYSHCN, 3) resources helpful to school nurses, 4) an emergency evacuation plan, and 5) role of other school personnel, other than school nurses, in performing health care procedures for CYSHCN.

Results

A total of 316 participants responded through the first mailing, 189 responded through the second mailing and 52 participants responded from the two conferences for a total of 557 surveys (56.3%). The participant responses included in this report were based on the self-report of being a school nurse and having a nursing credential. Fifteen surveys were eliminated because of duplication or non-identification of a school and 29 surveys were eliminated as they were not completed by school nurses, resulting in an adjusted response rate of 51.8% (n=513).

Information about the Participants Responding to the Survey

- 97.1% of the surveys were completed by a nurse that was either an R.N. or B.S.N.
- 67.4% of school nurses were serving the elementary grades and 82.7% were serving in more than one school
- 58.7% of nurses require continuing education hours for their job

Characteristics of Survey Respondents

	%
Credential of respondents	
R.N. or B.S.N.	97.1
L.P.N.	2.9
Grades in the schools they serve as a nurse ^a	
Elementary	67.4
Middle/Junior High	37.6
High School	24.0
Serve more than 1 school	82.7
Need continuing education contact hours for their jobs	58.7

^a The percentage adds to more than 100 as a nurse can serve multiple grades.

Health Care Procedures, Their Impact and Ability to Manage

Today's medical technology and federal laws have made it possible for CYSHCN to attend schools within their communities who typically could not in the past. Consequently, school nurses now perform a wide range of medical procedures during the school day. School nurses were asked to rate 25 health care procedures² with respect to the degree of impact the procedures had on their daily school routine (no impact, low impact, moderate impact, high impact and very high impact) and their ability to perform each procedure (not able, somewhat able, and very able). In the following graphs, significant impact equals the combined responses for moderate impact, high impact and very high impact.

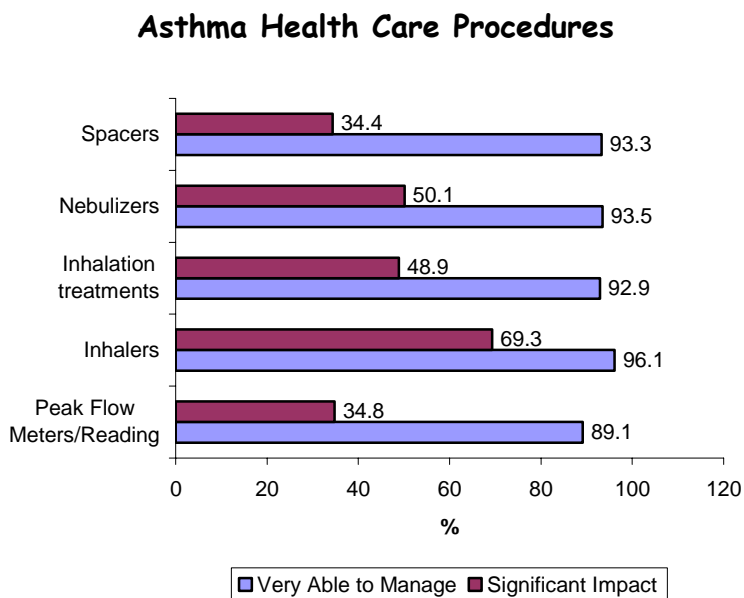
School nurses respond to a vast array of complex medical needs on a daily basis. Though the 25 listed procedures represent the most common procedures associated with special health care needs, it is not exhaustive, there are other procedures not listed that may equally impact a school nurse's day. Five of the procedures were specific to asthma and six were specific to diabetes.

School nurses reported being better able to perform the more common health care procedures, such as those procedures associated with asthma, some of the diabetes procedures, monitoring blood pressures, giving oral medications, seizure interventions and wheelchair transfers. They reported some lesser ability to perform those health care procedures that were less common or required more technical interventions, such as insulin pumps and alternating pump sites, ventilator care, ileostomy care, tracheostomy care, tracheostomy suctioning, nasogastric tube care, colostomy care, and gastrostomy tube care. See following graphs and table on pages three through five.

Asthma

Asthma was identified as the most prevalent health issue that school nurses deal with on a regular basis. Of the five asthma associated treatments, spacers and peak flow meters/readings had the least impact, with inhalers having the highest impact.

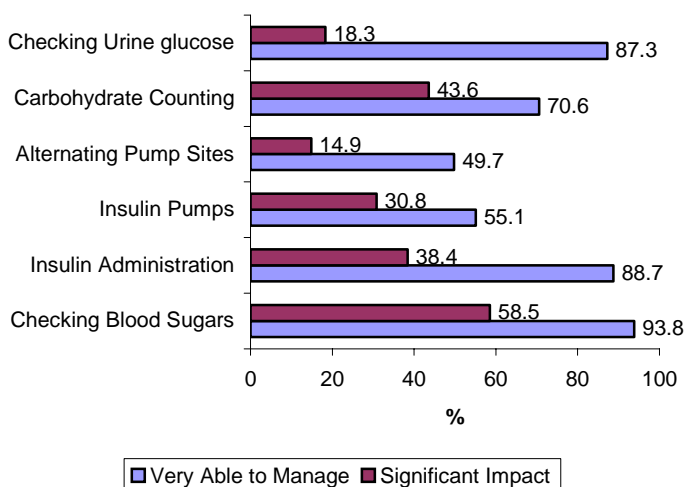
Approximately 90% or more of the school nurses reported being very able to manage all the five associated asthma treatments.



Diabetes

School nurses identified diabetes as the second most prevalent health issue in this report. More than half (58.5%) of the school nurses reported checking blood sugar as having a significant impact in their day-to-day routine, and 93.8% of them were very able to manage this health care procedure.

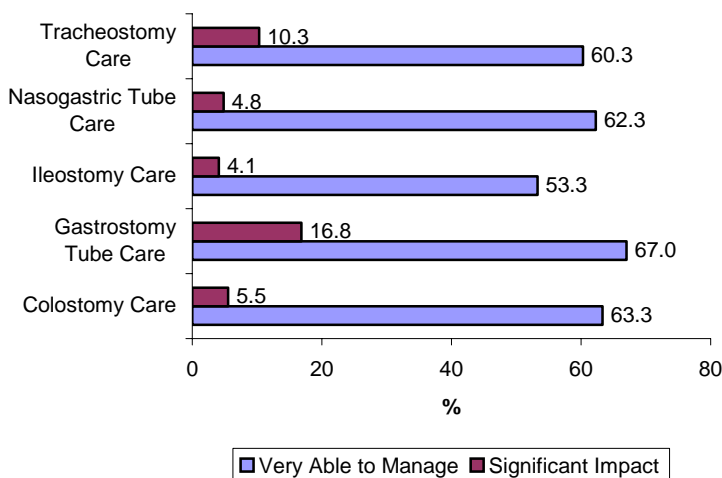
Diabetes Health Care Procedures



Stoma/Tube Care

There are multiple health conditions that require CYSHCN to undergo certain procedures that result in creating either a temporary or permanent orifice or opening, such as an opening established in the abdominal wall for a colostomy, ileostomy or gastrostomy or an opening in the trachea for purposes of inserting a tube (tracheostomy).

Stoma/Tube Care



Nursing assessment is needed to assure there are no complications and that the area is kept free of infection. The survey shows that school nurses are attending to various specialty procedures, with gastrostomy tube care identified as having the highest significant impact by 16.8% of the school nurses, and 67% of the school nurses reported that they were very able to manage this health care procedure.

Other Health Care Procedures

When asked about other health care procedures, 74.6% of the school nurses identified oral medication as having the highest significant impact in their day-to-day routine followed by seizure intervention (35.4%) and wheel chair transfers (22.7%). School nurses may have rated some of the healthcare procedures with a low impact because they are relatively rare; however, some of the procedures such as nasogastric tube feedings, ventilator care, and tracheostomy suctioning can be time consuming and do require nursing assessment.

Other Health Care Procedures

	Significant Impact (%)	Very Able to Manage (%)
Blood Pressure monitoring	26.0	95.2
Catheterizations	13.5	78.1
Nasogastric Tube Feedings	3.8	62.0
Oral Medications (for CYSHCN)	74.6	96.2
Oxygen		
Regulation/Maintenance	8.3	71.9
Seizure Intervention	35.4	87.4
Tracheostomy Suctioning	9.8	60.5
Wheelchair transfer	22.7	84.2
Ventilator Care	3.9	30.3

Types of Services/Resources Schools Currently Have and Their Usefulness in Providing Care for CYSHCN

Gaining an understanding of the various educational technologies that are currently being used will assist OCSHCN in identifying how educational resources can be provided to school nurses across the state. Access to Internet sites was the most frequently reported educational technology used by school nurses (84.3%) followed by phone use for help with resources and answering questions (64.3%).

Current Education Technologies

SERVICE	Currently Have (%)	Usefulness (%) *
On site ("hands on") training	27.2	89.3
On site group presentations	33.3	93.3
Teleconference presentations	9.2	73.6
By phone	64.3	97.9
By email	58.0	96.2
Reading materials/synopsis	60.4	97.3
Access to on-line classes	41.0	90.0
Access to an internet sites	84.3	98.4

*Usefulness equals the combined responses for useful and very useful categories.

Role of the School Nurse in Creating Individual Education Plans and Emergency Evacuation Plans

OCSHCN supports the medical home concept (primary care that is accessible, continuous, comprehensive, family centered, coordinated, compassionate, and culturally effective, for all CYSHCN) and practices the family centered approach (which includes active participation from the CYSHCN and their families in decisions that impact them). According to the National Survey of CSHCN (2001)¹, 50.5% of CYSHCN in Arizona receive coordinated, ongoing, comprehensive care within a medical home and 51.4% of Arizona families with CYSHCN partner in decision-making and are satisfied with the services they receive³. The school nurse is a valuable link in both medical home and family centered care. In addition to providing direct care to students, the school nurse plays a key role in communicating with families, primary care providers, and others on the school team.

Approximately, 47.8% of school nurses think the communication between the school nurse and families of CYSHCN is excellent and 48.6% think the communication is good. Overall, family members can be a valuable resource to the school nurse and the school team in meeting the needs of CYSHCN. The family and the information they provide can be especially helpful with the development and implementation of the Individualized Education Plan (IEP). The school nurse's involvement in the IEP assures that the identified medical needs of the student are a part of the education plan. School nurses are able to provide continuity of care for the student while at school by conferring with the child/youth, family members and primary care providers on specifics pertaining to the special health care need. 50.2% of school nurses routinely participate in student IEPs.

Having a plan in place that accommodates CYSHCN should an emergency evacuation need to occur at school facilitates safe evacuation. The school nurse's participation in creating the plan is essential. While 85.3% of schools have an emergency evacuation plan, only 45.0% of school nurses reported that the school creates the emergency evacuation plan in collaboration with the school nurse.

Individual Education Plan and Emergency Evacuation Plan

1. Communication between school nurse and family of CYSHCN	
Very good/ Excellent	47.8
Good/Fair	48.6
Poor	3.5
2. School nurse partner in student individual education plan	
Routinely	50.2
Occasionally	45.7
Never	4.2
3. School has an emergency evacuation plan	85.3
4. The plan was created in collaboration with *	
▪ I Don't Know Who Created the Plan	20.1
▪ The Special Education Program/504Coordinator	25.1
▪ School Administration	59.8
▪ The School Nurse	45.0
▪ Other School Personnel	41.7
▪ Parents	11.9
▪ Local Fire Department/Emergency Medical Services	27.5

* Schools with no emergency evacuation plan were excluded from analysis

Role of School Personnel Other Than School Nurses

Depending on the size of the school and the nurse-student ratio, often a team approach is necessary to meet the needs of CYSHCN. Because of their nursing education, clinical expertise and nursing assessment skills, it is important that a school nurse lead and guide the school health team. More than half of the participants reported that school personnel other than school nurses assist daily in performing health care procedures for CYSHCN and they reported that a school nurse is available, but not at all times. There were varying school personnel that assisted in performing some of the health care procedures. The most frequent were classroom assistants (52.0%), nurse assistants (51.5%), and teachers (29.3%).

There is no consistent statewide approach concerning the provision of health care procedures by a non-professional nurse and the type of training required for non-licensed professionals.

Other School Personnel that Assist in Health Care Procedures for CYSHCN

	%
Frequency	
Never	22.9
Daily	56.2
Weekly	10.8
Monthly	7.4
Quarterly	2.7
Titles of Other School Personnel *	
Classroom Assistant	52.0
Nurse Assistant	51.5
Teacher	29.3
Secretary	13.4
Principal	6.3
Office Staff	5.8
EMT	2.5
Office Manager	2.5
Attendance Clerk	2.0
Reasons Others Assist*	
A school nurse...	
Is not available at any time	3.7
Is available, but not at all times	46.6
Is able to delegate certain procedures	44.8
Has high acuity special needs student	12.1

(* The number of individual titles or reasons listed adds to more than the total number of respondents because respondents could list more than one title or reason for other school personnel assisting in health care procedures for CYSHCN)

Most Prevalent Health Issues, Their Impact and Ability to Manage

School nurses were asked to identify at least five of the most prevalent health issues and conditions for CYSHCN that they deal with on a regular basis, their impact, and ability to manage them. The most frequent conditions identified by the school nurses were asthma (80.3%), diabetes (63.7%), behavioral health (60.2%), epilepsy (47.6%), and cerebral palsy (21.6%).

Prevalent Health Issues

The impact on their day of the top five conditions varied; 87.1 % of the school nurses reported behavioral health as having a significant impact, followed by asthma (84.7%) diabetes (78%), cerebral palsy (63.1%), and epilepsy (55.7%). School nurses report of their ability to manage also varied for the top five conditions with 92.2% of the school nurses reporting they were very able to manage asthma, followed by diabetes (91.4%), epilepsy (86.9%), cerebral palsy (79.3%), and behavioral health (63.1%).

School nurses address multiple health conditions on a daily basis. Through quality care and assessment,

school nurses enable CYSHCN to attend school and achieve academic success that would be difficult to accomplish without their services. The school nurse plays a key role in promoting CYSHCN to self-manage chronic health conditions that will not only assist them at school, but also in the future as adults.

Health Issues	Respondent	(%) Significant Impact	Very Able to Manage
Asthma	80.3	84.7	92.2
Diabetes	63.7	78.0	91.4
Behavioral health	60.2	87.1	63.1
Epilepsy	47.6	55.7	86.9
Cerebral Palsy	21.6	63.1	79.3
ADHS	20.3	90.4	85.6
Spina bifida	13.6	67.1	80.0
TBI	9.0	58.7	65.2
Congenital heart disease	8.2	50.0	73.8
Allergies	7.4	86.8	73.7
Bipolar	7.4	71.1	63.2
Depression	7.4	76.3	57.9
Anxiety	6.4	72.7	63.6
Social issues	5.7	96.6	44.8
Cystic fibrosis	5.5	42.9	82.1
Autism	4.7	66.7	66.7
Eating disorder	4.3	63.6	50.0
Injuries	3.3	94.1	64.7
Hearing/vision	3.1	87.5	75.0
Pregnancy	2.9	73.3	80.0
Headaches	2.5	92.3	76.9
Obesity	2.5	92.3	46.2

System/Resources Available when Needing Support and Information about CYSHCN

State agencies and local organizations that provide services and information on special health care needs are valuable resources for school nurses and other school health team members. School nurses were asked whether they were aware of all or some of the resources identified in the survey. The agencies and organizations asked about in the survey are not exhaustive.

Available System/Resources

SYSTEM/RESOURCE	Know about (%)
Arizona Department of Education, Exceptional Students Services	50.0
ADHS, Office for Children/Youth with Special Health Care Needs	61.4
ADHS, Office of Behavioral Health	61.2
ADHS, Office of Women's and Children's Health Hotline	56.8
Arizona Health Care Cost Containment System (AHCCCS)	92.3
Children's Rehabilitative Services Clinics (CRS)	73.6
Pilot Parents of Southern Arizona	19.8
Raising Special Kids	42.4
Emily Anderson Center at Phoenix Children's Hospital	67.2
Bullhead Area Community Partnership for Special Needs Children (Mohave County)	6.7
The Children and Family Alliance of Southern Apache County	6.3
Comunidades Asistiendo A Niños con Necesidades Especiales de Salud (Yuma County)	5.3
Flagstaff Community Partnership (Coconino County)	8.2
Mesa Partnership for Children with Special Health Care Needs (Maricopa County)	14.6
Page Partnership for People with Special Needs (Coconino County)	4.1
Tri-City Partnership for Special Children and Families (Yavapai County)	5.9

The percent of school nurses that know about state agencies ranged between 50.0% (Arizona Department of Education, Exceptional Students Services) and 92.3%, (Arizona Health Care Cost Containment System).

Nurses were also asked about whether they were aware of certain non-state agencies. These agencies tend to be specific to certain geographic areas. Awareness ranged from 4.1% of nurses knowing about the Page Partnership for People with Special Needs, and 67.2% of nurses who knew about the Emily Anderson Center at Phoenix Children's Hospital.

Comparison between Urban and Rural School Nurses

A comparison of urban and rural ⁵ respondents showed a great deal of similarities between the needs of students with special health care needs and resources needed by school nurses. The majority of respondents were from urban areas of the state, nearly a 4:1 urban to rural ratio. Fourteen of the 15 counties were represented.

Of the 139 school nurses who responded to the question asking about the number of schools they serve, 21.6% of the urban school nurses and 7.1% of the rural school nurses reported serving one school, while 42.3% of urban school nurses and 47.6% of rural school nurses reported serving two schools.

Urban and Rural Respondents		
	Urban	Rural
R.N./B.S.N.	403	95
L.P.N.	7	8
Total	410	103

Approximately half of both the urban (58.2%) and rural (47.9%) nurses said they were assisted daily by school personnel other than nurses in performing health care procedures for CYSHCN. The reasons most often cited by urban school nurses was that a school nurse is able to delegate certain procedures (48.8%), and a school nurse is available, but not at all times (43.7%). For rural school nurses a school nurse is available, but not at all times was the most frequent response (58.3%), followed by a school nurse is able to delegate certain procedures (29.1%).

Most Prevalent Health Issues: Urban and Rural Comparison

The most prevalent health issues and conditions for CYSHCN that school nurses deal with on a regular basis were similar for both urban and rural school nurses. The seven most frequently identified health issues and conditions were the same for both urban and rural school nurses.

Urban and Rural Prevalent Health Issues

Urban		Rural	
Health Condition/Issue	%	Health Condition/Issue	%
Asthma	83.8	Asthma	79.6
Diabetes	69.4	Behavioral health	67.3
Behavioral health	61.1	Diabetes	52.0
Epilepsy	48.5	Epilepsy	52.0
Cerebral palsy	22.2	Cerebral palsy	23.5
ADHD	21.0	ADHD	21.4
Spina bifida	13.6	Spina bifida	16.3
Congenital heart disease	9.1	TBI	11.2
TBI	8.8	Social issues	10.2
Bipolar	8.6	Autism	9.2
Depression	8.6	Eating disorder	7.1

Types of Services/Resources Schools Currently Have Urban and Rural Comparison

Access to Internet sites was the most frequently reported educational technology used by both urban (84.4%) and rural (83.9%) school nurses. Followed by using the phone for help (67.9%) among urban nurses and reading materials/synopsis of current state of the art practice for CYSHCN by rural nurses (50.6%).

Health Care Procedures: Urban and Rural Comparison

Urban and Rural Health Care Procedures

Health Care Procedures	Urban (%)		Rural (%)	
	Significant Impact	Very Able to Manage	Significant Impact	Very Able to Manage
Oral Medications	76.1	96.6	68.7	94.7
Inhalers	70.0	95.9	66.7	96.9
Checking Blood Sugars	60.9	94.3	49.0	92.0
Nebulizers	50.4	93.8	48.9	92.3
Inhalation treatments	48.6	93.7	50.0	89.7
Carbohydrate Counting	46.2	71.0	33.0	68.8
Insulin Administration	40.0	89.9	31.9	84.0
Seizure Intervention	37.0	87.0	28.7	88.9
Peak Flow Meters/Reading	35.5	90.0	32.0	85.7
Spacers	32.8	93.2	41.2	93.7
Insulin Pumps	31.7	57.4	27.2	46.3
Wheelchair transfer	23.3	84.5	20.2	83.1
Blood Pressure monitoring	22.8	94.1	38.9	100.0
Checking Urine glucose	18.7	88.6	17.0	81.7
Gastrostomy Tube Care	17.5	69.7	14.1	57.1
Alternating Pump Sites	15.3	52.0	13.3	40.8
Catheterizations	14.7	79.0	8.8	74.7
Tracheostomy Care	11.6	62.7	5.5	51.4
Tracheostomy Suctioning	10.6	63.5	6.7	49.3
Oxygen Regulation	8.8	72.2	6.6	70.9
Colostomy Care	5.5	64.3	5.7	59.7
Nasogastric Tube Care	4.7	64.3	5.5	54.9
Ileostomy Care	4.3	55.6	3.3	45.2
Ventilator Care	4.1	32.2	3.4	23.6
Nasogastric Tube Feedings	4.0	63.7	3.3	56.2

The impact of health care procedures on the day-to-day routine of the school nurses was relatively comparable between urban and rural respondents. There were three procedures (blood pressuring monitoring, checking blood sugars and carbohydrate counting) in which there was a greater than 10% difference in impact between urban and rural ratings.

There was little difference between urban and rural school nurses for five health care procedures that were rated as low impact: colostomy care-including skin care (5.5% urban and 5.7% rural), nasogastric tube feedings (4.0% urban and 3.3% rural), ventilator care (4.1% urban and 3.4% rural), nasogastric tube care-including skin care (4.7% urban and 5.5% rural) and ileostomy care-including skin care (4.3% urban and 3.3% rural).

The ability to manage health care procedures was similar between urban and rural school nurses. Nurses reported a higher ability to manage the more common procedures such as inhalers (95.9% urban and 96.9% rural), checking blood sugars (94.3% urban and 92% rural), and wheelchair transfers (84.5% urban and 83.1% rural). Those procedures that were either less common or required more technical interventions, such as insulin pumps (57.4% urban and 46.3% rural), alternating pump sites (52% urban and 40.8% rural) and ventilator care (32.2% urban and 23.6% rural) rated a lower ability to manage.

Recommendations

As a result of the School Nurse Resource Survey findings, OCSHCN has identified the following areas to be addressed:

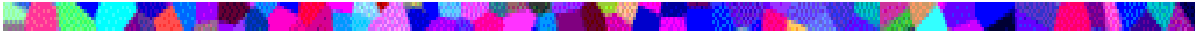
1. Disseminate resource information to school nurses about state agencies that provide services and information on special health care needs.
2. Work with school nurses to identify what classes and trainings ADHS/OCSHCN could provide on the ADHS Learning Management System. Use it to design curricula and develop specific learning content to meet some of the educational and possible certification needs of school nurses.
3. Identify opportunities for school nurses to partner with families of CYSHCN.
4. Increase opportunities for school nurses to obtain education via videoconferencing.
5. Work with families of CYSHCN, school nurses, health care providers and other community entities to promote adequate school nurse coverage and school health services to meet the needs of CYSHCN.
6. Work with families of CYSHCN, school nurses and the Arizona Department of Education to increase the involvement of school nurses on IEPs and the schools' emergency evacuation plans.

References

1. Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics, State and Local Area Integrated Telephone Survey, National Survey of Children with Special Health Care Needs, 2001.
2. 2000 American Academy of Pediatrics, *Childhood Emergencies in the Office, Hospital, and Community: Organizing Systems of Care*. Chapter on Children with Special Health Care Needs at School cited a 1994 study in Pennsylvania schools that identified the services required by students with special health care needs in regular school settings. This list was used as the starting point in establishing the list of health care procedures about which the survey asked.
3. National Health Interview Survey conducted by the National Center for Health Statistics, Center for Disease Control and Prevention, 2001.
4. For the purpose of this report, urban and rural are based on the definitions for urban and rural used by the Arizona Department of Health Services, Public Health Services in the publication, "Arizona Health Status and Vital Statistics, 2004". Urban counties are Maricopa, Pinal, Pima and Yuma counties. Rural Counties are Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Mohave, Navajo, Santa Cruz and Yavapai counties.

Arizona Department of Health Services

"Leadership for a Healthy Arizona"



The Office for Children with Special Health Care Needs (OCSHCN) within the Arizona Department of Health Services was formed in 1993. Since its inception, OCSHCN has operated on the principal that the family is the center, the most important participant in the system of care for children and youth with special health care needs. The philosophy along with a belief that services are enhanced in a system that is accountable, cost effective and responsive to multiple stakeholders is embedded in its mission and vision:

Mission: To continuously improve comprehensive systems of care that enhance the health, future, and quality of life for children and youth who have special health care needs, their families, and the communities in which they live.

Vision: All children and youth with special health care needs have the opportunity to reach their full potential.

Websites for More Information

Arizona Department of Health Services - OCSHCN: www.azdhs.gov

Data Resource Center for Child and Adolescent Health - www.cshcndata.org

Family Voices - *families speaking on behalf of CSHCN*: www.familyvoices.org

Healthy and Ready to Work National Center - *transition to adult life*: www.hrtw.org

Maternal and Child Health Bureau - *Title V, Block Grant, CSHCN*: www.mchb.hrsa.gov/programs

National Center for Health Statistics - *National Survey of Children with Special Health Care Needs*:
www.cdc.gov/nchs/about/major/slits/cshcn.htm



For more information contact:

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There's nothing so powerful as the potential of a child

